

# EXHIBIT 7



**Final**

**Record of Decision for  
Parcels D-1 and UC-1**

**Hunters Point Shipyard  
San Francisco, California**

**July 24, 2009**

Prepared by:  
**Department of the Navy  
Base Realignment and Closure  
Program Management Office West  
San Diego, California**

Prepared under:  
**Naval Facilities Engineering Command  
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Contract Task Order 030**

CHAD-3213-0030-0019

***This public summary represents information presented in the document listed below.***

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**Public Summary: Final Record of Decision for Parcels D-1 and UC-1, Hunters Point Shipyard, San Francisco, California, July 24, 2009**

The Department of Navy (Navy) has prepared this final record of decision (ROD) to address remaining contamination at Parcels D-1 and UC-1 at Hunters Point Shipyard in San Francisco, California. The remedial action selected in this ROD is necessary to protect the public health, welfare, and the environment from actual or potential releases of contaminants from the site. The selected remedial action for Parcels D-1 and UC-1 addresses metals (arsenic and manganese) and polycyclic aromatic hydrocarbons (PAH) in soil, volatile organic compound (VOC) vapors and several metals (chromium VI and nickel) from groundwater in the A-aquifer, and radionuclides in structures (such as buildings) and in soil.

The Navy considered the following remedial alternatives for contaminants in soil: (1) no action; (2) institutional controls (IC) and maintained landscaping; (3) ICs, limited excavation and off-site disposal; (4) ICs and covers; and (5) a combination of ICs, covers, excavation and disposal. The Navy considered the following remedial alternatives for contaminants in groundwater: (1) no action; (2) long-term monitoring and ICs; (3) *in situ* treatment of VOCs using biological compounds or zero-valent iron, monitoring and ICs; and (4) *in situ* treatment of VOCs and metals using biological compounds or zero-valent iron, monitoring and ICs. The Navy considered the following remedial alternatives for radiologically impacted soil or structures: (1) no action; and (2) surveying radiologically impacted areas that may include structures and former building sites, decontaminating (and demolishing if necessary) buildings, excavating storm drain and sanitary sewer lines and soils in impacted areas, and screening, separating, and disposing of radioactive sources and contaminated excavated soil at an off-site low-level radioactive waste facility. The Selected Remedy for Parcels D-1 and UC-1 is Alternative S-5 (excavation, disposal, covers, and ICs) for soil; Alternative GW-4A&B (treatment, monitoring, and ICs) for groundwater; and Alternative R-2 (survey, decontamination, excavation, disposal, and release) for radiologically impacted structures and soil.

**Information Repositories:** A complete copy of the "Final Record of Decision for Parcels D-1 and UC-1" dated July 24, 2009, is available to community members at:

San Francisco Main Library  
100 Larkin Street  
Government Information Center, 5th Floor  
San Francisco, CA 94102  
Phone: (415) 557-4500

Anna E. Waden Bayview Library  
5075 Third Street  
San Francisco, CA 94124  
Phone: (415) 355-5757

The report is also available to community members on request to the Navy. For more information about environmental investigation and cleanup at Hunters Point Shipyard, contact Hamide Kayaci, remedial project manager for the Navy, at:

Hamide Kayaci  
Department of the Navy  
Base Realignment and Closure  
Program Management Office West  
1455 Frazee Road, Suite 900  
San Diego, CA 92108-4310  
Phone: (619) 532-0930  
Fax: (619) 532-0995  
E-mail: hamide.kayaci@navy.mil

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July 24, 2009

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- A Applicable or Relevant and Appropriate Requirements
- B Responsiveness Summary
- C References (Reference documents provided on CD only)
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## ACRONYMS AND ABBREVIATIONS

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§	Section
µg/L	Microgram per liter
ARAR	Applicable or relevant and appropriate requirement
ARIC	Area requiring institutional controls
BCT	BRAC Cleanup Team
bgs	Below ground surface
BRAC	Base realignment and closure
CDPH	California Department of Public Health
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	<i>Code of Federal Regulations</i>
cm	Centimeter
COC	Chemical of concern
CSM	Conceptual site model
dpm	Disintegrations per minute
DTSC	Department of Toxic Substances Control
ELCR	Excess lifetime cancer risk
EPA	U.S. Environmental Protection Agency
FFA	Federal Facility Agreement
FS	Feasibility study
GRA	General response action
HGAL	Hunters Point groundwater ambient level
HHRA	Human health risk assessment
HI	Hazard index
HPAL	Hunters Point ambient level
HPS	Hunters Point Shipyard
HRA	Historical radiological assessment
IC	Institutional control
IR	Installation Restoration
LUC RD	Land use control remedial design
mg/kg	Milligram per kilogram

**ACRONYMS AND ABBREVIATIONS (Continued)**

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NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
NRDL	Naval Radiological Defense Laboratory
O&M	Operation and maintenance
pCi/g	Picocuries per gram
pCi/L	Picocuries per liter
PA	Preliminary assessment
PAH	Polycyclic aromatic hydrocarbon
PCE	Tetrachloroethene
PQL	Practical quantitation limit
RAB	Restoration Advisory Board
RACR	Removal action completion report
RAO	Remedial action objective
RBC	Risk-based concentration
RD	Remedial design
RI	Remedial investigation
RME	Reasonable maximum exposure
RMP	Risk management plan
RMR	Risk management review
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
SFPUC	San Francisco Public Utility Commission
SI	Site inspection
SVE	Soil vapor extraction
SWC	Surface water criteria
TCE	Trichloroethene
TCRA	Time-critical removal action
TRC	Technical review committee
UST	Underground storage tank
VOC	Volatile organic compound
Water Board	San Francisco Bay Regional Water Quality Control Board
ZVI	Zero-valent iron



## 1. DECLARATION

This Record of Decision (ROD) presents the selected remedy for Parcel D-1 and Parcel UC-1 at Hunters Point Shipyard (HPS) in San Francisco, California. HPS was placed on the National Priorities List (NPL) in 1989 (U.S. Environmental Protection Agency [EPA] ID: CA1170090087). The remedy was selected in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 (Title 42 *United States Code* Section (§) 9601, et seq.), and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (Title 40 *Code of Federal Regulations* [CFR] Part 300). This decision is based on information contained in the Administrative Record<sup>1</sup> ([Attachment D](#)) for the site. Information not specifically summarized in this ROD or its references but contained in the Administrative Record has been considered and is relevant to the selection of the remedy at Parcels D-1 and UC-1. Thus, the ROD is based on and relies on the entire Administrative Record file in making the decision.

The Department of the Navy and EPA jointly select the remedy for Parcels D-1 and UC-1. The California Department of Toxic Substances Control (DTSC) and the San Francisco Bay Regional Water Quality Control Board (Water Board) concur on the remedy for Parcels D-1 and UC-1. The Navy, as the lead federal agency, provides funding under the Base Realignment and Closure (BRAC) program for site cleanups at HPS. The Federal Facility Agreement (FFA) for HPS documents how the Navy intends to meet and implement CERCLA in partnership with EPA, DTSC, and the Water Board.

Former Parcel D is one of six parcels (Parcels A through F) originally designated for environmental restoration. The Navy has divided the former Parcel D into four new parcels: Parcel D-1, Parcel D-2, Parcel G, and Parcel UC-1 in order to facilitate potential early transfer. Although previous documents focused on the overall Former Parcel D, referenced information from these documents is also relevant for Parcel D-1 and Parcel UC-1. Long-term uses in specified areas within Parcels D-1 and UC-1 identified in the Hunters Point Shipyard Redevelopment Plan (July 14, 1997) include mixed use (residential and industrial) and industrial reuse.

Environmental investigations began at Former Parcel D in 1988. A Final Remedial Investigation (RI) Report was completed in 1997, and a Revised Final Feasibility Study (FS) Report was completed in 2007. This ROD documents the final remedial action for Parcels D-1 and UC-1 and does not include or affect any other sites at HPS.

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<sup>1</sup> **Blue text** identifies detailed site information available in the Administrative Record and listed in the References Table ([Attachment C](#)). This ROD is also available on CD whereby **blue text** serves as a hyperlink to reference information. The hyperlink will open a text box at the top of the screen. A blue box surrounds applicable information in the hyperlink. To the extent there may be any inconsistencies between the referenced information attached to the ROD via hyperlinks and the information in the basic ROD itself, the language in the basic ROD controls.



## 1.1 SELECTED REMEDY

The CERCLA remedial action selected in this ROD is necessary to protect the public health, welfare, and the environment from actual or potential releases of contaminants from the site. The remedial action for Parcels D-1 and UC-1 addresses metals (especially arsenic and manganese) and polycyclic aromatic hydrocarbons (PAH) in soil, volatile organic compound (VOC) vapors and several metals (chromium VI and nickel) in groundwater (A-aquifer), and radionuclides in structures (such as buildings) and in soil. The remedy for both Parcels D-1 and UC-1 consists of excavation and off-site disposal, durable covers, and institutional controls (IC) to address soil contamination; treatment of VOCs with biological substrate or zero-valent iron (ZVI), groundwater monitoring, and ICs to address groundwater contamination; and surveying, decontaminating, and removing radiologically impacted structures and soil.

The remedial action is protective of human health and the environment, complies with federal and state statutes and regulations that are applicable or relevant and appropriate to the remedial action, and is cost-effective. The selected remedial action for both Parcels D-1 and UC-1 uses permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable and satisfies the statutory preference for remedies employing treatment that reduces the toxicity, mobility, or volume of hazardous substances, pollutants or contaminants as a principal element. A statutory review will be conducted 5 years after the ROD is signed to ensure that the remedy is, or will be, protective of human health and the environment.

## 1.2 DATA CERTIFICATION CHECKLIST

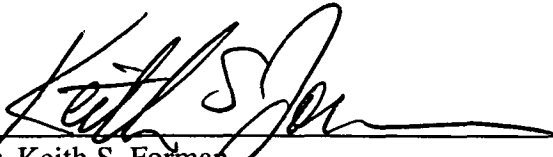
The following information is included in Section 2 of this ROD. Additional information can be found in the Administrative Record file for this site:

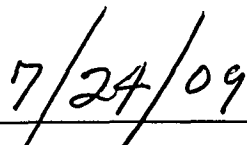
- Chemicals of concern (COC) and their concentrations (Sections 2.3 and 2.5).
- Baseline risk represented by the COCs (Section 2.5).
- Remediation goals established for COCs and the basis for these goals (Sections 2.5 and 2.7).
- Principal threat wastes (Section 2.6).
- Current and reasonably anticipated future land use assumptions and current and potential future beneficial uses of groundwater (Section 2.4).
- Potential land and groundwater use that will be available at the site as a result of the selected remedy (Section 2.9.3).

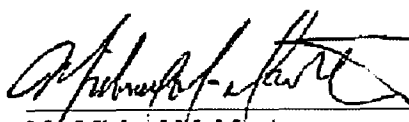
- Estimated capital costs, annual operation and maintenance (O&M), and total present-worth costs; discount rate; and the number of years over which the remedy cost estimate is projected (Table 6).
- Key factors that led to selecting the remedy (for example, a description of how the selected remedy provides the best balance of tradeoffs with respect to the balancing and modifying criteria, highlighting criteria key to the decision) (Section 2.9.1).


**1.3 AUTHORIZING SIGNATURES**

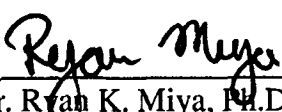
This signature sheet documents the Navy's and EPA's co-selection of the remedy in this ROD. This signature sheet also documents the State of California's (DTSC and Water Board) concurrence with this ROD.

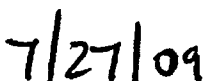
  
 Mr. Keith S. Forman  
 Base Realignment and Closure Environmental Coordinator  
 Base Realignment and Closure Program Management  
 Office West  
 Department of the Navy

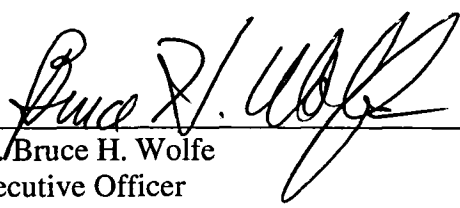
  
 Date

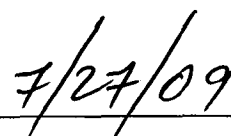
  
 Mr. Michael M. Montgomery  
 Assistant Director of Federal Facilities  
 and Site Cleanup Branch, Region 9  
 U.S. Environmental Protection Agency

  
 Date

  
 Mr. Ryan K. Miya, M.D.  
 San Francisco Peninsula Team Leader  
 Brownfields and Environmental Restoration Program  
 California Environmental Protection Agency  
 Department of Toxic Substances Control

  
 Date

  
 Mr. Bruce H. Wolfe  
 Executive Officer  
 California Environmental Protection Agency  
 San Francisco Bay Regional Water Quality Control Board

  
 Date

Alternative R-2 requires the use of standard technologies that are easy to implement. Alternative R-1 does not involve remedial technologies and requires no implementation. Therefore, the distinction between these two alternatives regarding implementability is minimal.

**Cost.** Alternatives S-1 requires no action; therefore, no costs are associated with this alternative. Alternative S-2 is the least costly (\$443,000) because it includes no active remediation before the property is transferred. Alternative S-3 has moderate cost (approximately \$978,000), and Alternatives S-4 and S-5 that include the covers as a process option have the greatest cost (approximately \$2.45 million and \$2.97 million).

Alternative GW-1 has the highest rating because no actions would be taken resulting in no cost. The cost of Alternative GW-3A is moderate (approximately \$613,000) because of in situ treatment of VOCs and long-term monitoring of metals. The costs of Alternative GW-2 are slightly higher (approximately \$880,000), most of which is for the 30 years of long-term monitoring. The cost of Alternative GW-4A is similar (approximately \$718,000). The capital cost of Alternative GW-3B is the second highest because of the cost of the ZVI additive treatment for VOC plumes (\$1.34 million). The capital cost for Alternative GW-4B is the highest because of the cost of the ZVI additive treatment for both VOC and metal plumes (\$2.3 million).

Alternative R-1 requires no action; therefore, no costs are associated with this alternative. Alternative R-2 is costly (\$15 million) but effectively addresses all radiologically impacted sites.

## **Modifying Criteria**

**State Acceptance.** State involvement has been solicited throughout the CERCLA process. The State of California concurs with the Navy's selected remedial alternatives.

**Community Acceptance.** Community acceptance is evaluated based on comments received from the public during the public comment period for the proposed plan. The proposed plan was presented to the community and discussed during a public meeting on July 30, 2008. Comments were also gathered during the public comment period from July 23 through August 22, 2008. Attachment B, the responsiveness summary, of this ROD addresses the public's comments and concerns about the selected remedial alternatives at Parcels D-1 and UC-1.

## **2.9 SELECTED REMEDY**

### **2.9.1 Rationale for Selected Remedy**

The selected remedy for Parcels D-1 and UC-1 is Alternative S-5 (excavation, disposal, covers, and ICs) for soil; Alternative GW-4A and B (treatment, monitoring, and ICs) for groundwater; and Alternative R-2 (survey, decontamination, excavation, disposal, and release) for radiologically impacted structures and soil. The selected remedy provides the best balance of tradeoffs with respect to the nine criteria. The remedy for soil meets the RAOs by

excavating and disposing of contaminated soils with PAHs at concentrations that exceed remediation goals, thus removing the source of contamination. Additionally, the entire parcel will be covered to cut off potential exposure pathways to arsenic, manganese, and any remaining COCs in soils. The remedy for groundwater meets the RAOs by treating groundwater to reduce concentrations of VOCs and metals to below remediation goals, thus removing the source of contamination. Monitoring will be implemented as needed to confirm the treatment was successful as identified in the RD. The remedy for radiologically impacted sites meets the RAOs by identifying and decontaminating any impacted structures. Additionally, remaining contaminated materials, storm drains and sewers, and soils would be excavated and disposed of off site, thereby removing the source of contamination.

ICs, including restrictive covenants regulating restricted land use, restricted activities, and prohibited activities, will be implemented to prevent exposure to areas where potential unacceptable risk is posed by COCs in soil and groundwater. ICs will remain in place as long as contamination remains at the site above levels that allow for unlimited use and unrestricted exposure.

## **2.9.2 Description of Selected Remedy**

The selected remedy for soil consists of removing soil in selected areas where COCs exceed remediation goals and disposing of excavated soil at an off-site facility. Six areas are planned for excavation within Parcel D-1 with a total of approximately 504 cubic yards of soil to be removed. Assuming a 20-percent bulking during this removal, approximately 605 cubic yards of soil will be hauled off site for disposal. In addition, 234 cubic yards of existing soil stockpiles within Parcel D-1 that may contain hazardous levels of contamination but pre-date the radiological TCRA will be hauled off site for disposal as part of this alternative. There are no excavations or stockpiles within Parcel UC-1.

If the TCRA does not achieve the remedial goals, work will continue until the remedial goals specified in the ROD are met. Across all of Parcels D-1 and UC-1, durable covers will be applied as physical barriers to cut off potential exposure to metals in soil. The ubiquitous naturally occurring metals prevent the parcels from being suitable for unrestricted residential reuse as shown in the Final Revised Feasibility Study for Parcel D. Existing asphalt and concrete surfaces (repaired as necessary to be durable) and buildings will act as covers. The type of new covers installed will be consistent with the redevelopment plan (for example, soil covers may be used for open space areas or asphalt for industrial areas). The cover design, including details on how the cover would be finished at the seawalls, will be provided in the RD. Covers will be maintained to contain the soil at the seawall. The RD will include plans for inspection and maintenance to ensure the covers remain intact. ICs will be implemented to maintain the integrity of the covers, including where the covers meet the seawall. With the construction and maintenance of durable covers and implementation of specified ICs, the remedy will be protective with respect to the cumulative risks (residential scenario) identified in Section 2.5.1 and Table 2. Modification of the covers will be governed by the LUC RD report and Risk Management Plan discussed below and its terms will be enforced by the regulatory agencies.

The selected remedy for groundwater consists of actively treating VOCs in groundwater using an injected biological substrate or ZVI to destroy the VOCs in the IR-71 groundwater plume and minimize the possible migration of metals in the groundwater plume at IR-09 into Parcel UC-1 (see Figure 7). A treatability study is currently being conducted in Parcels G and D-1 using ZVI injection points in the plumes associated with IR-71. Groundwater monitoring will occur in and around the remediation areas and also in downgradient locations in D-1 and UC-1, as necessary. The locations of monitoring points and the monitoring frequency will be established in the RD. The RD will use current information on the plume extent and concentration to select the actual injection parameters. The monitoring plan will be flexible to allow modifications as data are collected.

Soil vapor surveys will be conducted for the following purposes:

- To evaluate potential vapor intrusion risks,
- To identify COCs for which risk-based numeric action levels for VOCs in soil gas would be established (based on a cumulative risk of  $10^{-6}$ ),
- To identify where the initial areas requiring institutional controls (ARIC) for VOCs would be retained and where they would be released, and
- To evaluate the need for additional remedial action in order to remove ARICs.

The selected remedy for radiologically impacted soil and structures consists of surveying radiologically impacted buildings and former building sites with documented radiological impacts for unrestricted release. Unrestricted release means that a property can be used for any residential or commercial purpose once regulatory requirements have been met. To meet the objective of unrestricted radiological release, residential remedial goals will be used for radiologically impacted buildings, storm drains, sewer lines, and soil. Decontamination will be performed and buildings will be dismantled if necessary. Remaining radiologically impacted storm drains and sanitary sewer lines throughout Parcels D-1 and UC-1 will be removed and disposed of off site.

The Navy has continued to conduct its ongoing HPS Radiological Removal Action. As of the date of this ROD, the Navy has completed the removal of radiologically impacted storm and sanitary sewer piping within Parcel G and is close to completing the removal actions in Parcel UC-1. Survey and removal actions at Parcel D-1 have been scheduled to begin in late 2009. Once the removal actions have been completed at Parcels D-1 and UC-1, a RACR will summarize all Building, Storm and Sewer Drain Final Status Survey Reports and Survey Unit Package Reports. Following concurrence on the RACR, unrestricted radiological release is to be granted. Should unrestricted radiological release not be achieved, further remedial actions will occur to meet remedial goals established in the ROD. Each radiologically impacted site will be investigated through the CERCLA process. If the final report of the site investigation is approved by the stakeholders and the site is determined to require no further action, the classification of "radiologically impacted" may be removed.



The survey and removals will occur before any covers are installed as part of Alternative S-5. Buildings, former building sites, and excavated areas will be surveyed after cleanup is completed to ensure that no residual radioactivity is present at levels above the remediation goals. Excavated soil, building materials, and drain material from radiologically impacted sites will be screened and radioactive sources and contaminated soil will be removed and disposed of at an off-site, low-level radioactive waste facility.

**ICs<sub>(43)</sub>** will be implemented to prevent exposure to areas where potential unacceptable risk is posed by COCs in soil and groundwater. ICs are legal and administrative mechanisms used to implement land use restrictions that are used to limit the exposure of future landowners or users of the property to hazardous substances present on the property, and to ensure the integrity of the remedial action. ICs are required on a property where the selected remedial cleanup levels result in contamination remaining at the property above levels that allow for unlimited use and unrestricted exposure. ICs will be maintained until the concentrations of hazardous substances in soil and groundwater are at such levels to allow for unrestricted use and exposure. Implementation of ICs includes requirements for monitoring and inspections, and reporting to ensure compliance with land use or activity restrictions.

The Navy has concluded that it will rely on proprietary controls in the form of environmental restrictive covenants as provided in the “Memorandum of Agreement Between the United States Department of the Navy and the California Department of Toxic Substances Control” and attached covenant models (Navy and DTSC 2000) (hereinafter referred to as the “Navy/DTSC MOA”).

More specifically, land use and activity restrictions will be incorporated into two separate legal instruments as provided in the Navy/DTSC MOA:

1. Restrictive covenants included in one or more Quitclaim Deeds from the Navy to the property recipient.
2. Restrictive covenants included in one or more “Covenant to Restrict Use of Property” entered into by the Navy and DTSC as provided in the Navy/DTSC MOA and consistent with the substantive provisions of *California Code of Regulations* (Cal. Code Regs.) tit. 22 § 67391.1.

The “Covenant(s) to Restrict Use of Property” will incorporate the land use restrictions into environmental restrictive covenants that run with the land and that are enforceable by DTSC and EPA as a third party beneficiary against future transferees and users. The Quitclaim Deed(s) will include the identical land use and activity restrictions in environmental restrictive covenants that run with the land and that will be enforceable by the Navy against future transferees.

The activity restrictions in the “Covenant(s) to Restrict Use of Property” and Deed(s) shall be addressed in the Land Use Control Remedial Design (LUC RD) Report that would be reviewed and approved by the FFA signatories. The LUC RD shall be referenced in the applicable Covenant to Restrict Use of Property and Deed. The LUC RD shall be submitted in



accordance with the FFA schedule. The LUC RD shall specify soil and groundwater management procedures for compliance with the remedy selected in the Parcels D-1 and UC-1 ROD. The LUC RD shall identify the roles of local, state, and federal government in administering the LUC RD and shall include, but not be limited to, procedures for any necessary sampling and analysis requirements, worker health and safety requirements, and any necessary site-specific construction and/or use approvals that may be required.

Land use restrictions will be applied to specified portions of the facility and described in findings of suitability to transfer, findings of suitability for early transfer, "Covenant(s) to Restrict Use of Property" between the Navy and DTSC, and any Quitclaim Deed(s) conveying real property containing Parcels D-1 and UC-1 at HPS.

A Risk Management Plan (RMP) may be prepared by the City and County of San Francisco and approved by the FFA signatories that may set forth certain requirements and protocols for implementing the activity restrictions specified in the ROD.

### **Access**

The Deed and Covenant shall provide that the Navy and FFA signatories and their respective officials, agents, employees, contractors, and subcontractors shall have the right to enter upon HPS Parcels D-1 and UC-1 for purposes consistent with the Navy IR Program or the FFA.

### **Implementation**

The Navy shall address and describe IC implementation and maintenance actions including but not limited to frequency and requirements for periodic inspections during development and post development, monitoring, and reporting in the preliminary and final LUC RD reports to be developed and submitted to the FFA signatories for review and approval pursuant to the FFA (see "Navy Principles and Procedures for Specifying, Monitoring and Enforcement of Land Use Controls and Other Post-ROD Actions" attached to January 16, 2004 Department of Defense memorandum titled "Comprehensive Environmental Response, Compensation and Liability Act [CERCLA] Record of Decision [ROD] and Post-ROD Policy"). The preliminary and final LUC RD reports are primary documents as provided in Section 7.3 of the FFA.

The Navy is responsible for implementing, maintaining, reporting on, and enforcing land use controls. Although the Navy may later transfer these procedural responsibilities to another party by contract, property transfer agreement, or through other means, the Navy shall retain ultimate responsibility for remedy integrity.

### **Activity Restrictions that Apply throughout Parcels D-1 and UC-1**

The following sections describe the IC objectives to be achieved through activity restrictions throughout Parcels D-1 and UC-1 in order to ensure that any necessary measures to protect human health and the environment and the integrity of the remedy have been undertaken.

### **Restricted Activities**

The following restricted activities throughout HPS Parcels D-1 and UC-1 must be conducted in accordance with the “Covenant(s) to Restrict Use of Property”, Quitclaim Deed(s), the Parcels D-1 and UC-1 RMP, the LUC RD report, and if required, any other work plan or document approved in accordance with these referenced documents and must be further reviewed and approved by the FFA signatories:

- a. “Land disturbing activity” which includes but is not limited to: (1) excavation of soil, (2) construction of roads, utilities, facilities, structures, and appurtenances of any kind, (3) demolition or removal of “hardscape” (for example, concrete roadways, parking lots, foundations, and sidewalks), (4) any activity that involves movement of soil to the surface from below the surface of the land, and (5) any other activity that causes or facilitates movement of known contaminated groundwater.
- b. Alteration, disturbance, or removal of any component of a response or cleanup action (including but not limited to pump-and-treat facilities, shoreline protection, and soil cap/containment systems); groundwater extraction, injection, and monitoring wells and associated piping and equipment; or associated utilities.
- c. Extraction of groundwater and installation of new groundwater wells with the exception of environmental sampling and monitoring requirements described in this ROD.
- d. Removal of or damage to security features (for example, locks on monitoring wells, survey monuments, fencing, signs, or monitoring equipment and associated pipelines and appurtenances).

### **Prohibited Activities**

The following activities are prohibited throughout HPS Parcels D-1 and UC-1:

- a. Growing vegetables or fruits in native soil for human consumption.
- b. Use of groundwater.

### **Proposed Activity Restrictions Relating to VOC Vapors at Specific Locations within Parcels D-1 and UC-1**

Any proposed construction of enclosed structures must be approved in accordance with the “Covenant(s) to Restrict Use of the Property,” Quitclaim Deed(s), LUC RD, and the RMP with approval of the FFA signatories prior to the conduct of such activity within the ARIC for VOC vapors to ensure that the risks of potential exposures to VOC vapors are reduced to acceptable levels that are adequately protective of human health. The reduction in potential risk can be achieved through engineering controls or other design alternatives that meet the specifications set forth in the ROD, RD reports, LUC RD report, and the RMP. Initially, the ARIC will include all of Parcels D-1 and UC-1. The ARIC for VOC vapors may be modified by the FFA signatories as the soil contamination areas and groundwater contaminant plumes that are producing unacceptable

vapor inhalation risks are reduced over time or in response to further soil, vapor, and groundwater sampling and analysis for VOCs that establishes that areas now included in the ARIC for VOC vapors do not pose unacceptable potential exposure risk to VOC vapors.

### **Additional Land Use Restrictions for Areas Designated for Industrial Reuse**

The following restricted land uses for property areas designated for industrial land uses in the San Francisco Redevelopment Agency's Reuse Plan must be reviewed and approved by the FFA Signatories in accordance with the "Covenants to Restrict Use of the Property," Quitclaim Deed(s), LUC RD, and the RMP for each parcel prior to use of the property for any of the following restricted uses:

- a. A residence, including any mobile home or factory built housing, constructed or installed for use as residential human habitation,
- b. A hospital for humans,
- c. A school for persons under 21 years of age, or
- d. A daycare facility for children.

### **2.9.3 Expected Outcomes of the Selected Remedy**

For soil, the expected outcome is that excavation will remove contaminated soil that exceeds remediation goals for PAHs. Residual risks from these and other COCs would be mitigated through the use of durable covers and access restrictions to restrict exposure. Following implementation of the remedy, the property will be suitable for the uses specified in the redevelopment plan.

The groundwater remedy is expected to achieve remediation goals by actively treating VOCs and metals in groundwater to restore the aquifer quality by reducing or immobilizing the mass of contaminants of concern in groundwater to levels that do not pose a threat to human health through the inhalation exposure pathway. A treatability study using ZVI injections is currently underway in both Parcels G and D-1. Although treatment of groundwater is expected to reduce VOC vapors released from groundwater, ARICs for vapor intrusion may be needed at a few locations at Parcels D-1 and UC-1. Furthermore, the Navy intends to prohibit the use of groundwater at Parcels D-1 and UC-1 through the use of ICs.

For radiological contamination, the remedy includes surveys, decontamination, excavation, and off-site disposal. The removal of contaminants from radiologically impacted buildings and former building sites with documented radiological impacts, and removal of potential radiologically impacted sanitary and storm sewers and soils, are expected to result in a reduction of the potential risks to levels below remediation goals associated with exposure to radionuclides of concern.

The historical radiological assessment (HRA) classified several buildings, former building sites, and land areas in Parcels D-1 and UC-1 as “radiologically impacted.” Each of the radiologically impacted sites will be investigated through the CERCLA process. If the final report of the site investigation is approved by the stakeholders and the site is determined to require no further action, the classification of “radiologically impacted” may be removed.

#### 2.9.4 Statutory Determinations

In accordance with the NCP, the selected remedy meets the following statutory determinations.

- **Protection of Human Health and the Environment** – The selected remedy for soil will protect human health and the environment through excavation of contaminated soil, preventing exposure to remaining metals by installing durable covers, and the implementation of ICs. The selected remedy for groundwater will provide long-term protection by reducing concentrations of VOCs and metals through treatment.
- **Compliance with ARARs** – CERCLA § 121(d)(1) states that remedial actions on CERCLA sites must attain (or the decision document must justify the waiver of) any federal or more stringent state environmental standards, requirements, criteria, or limitations that are determined to be legally applicable or relevant and appropriate. Chemical-specific ARARs are health- or risk-based numerical values or methods that, when applied to site-specific conditions, establish the acceptable amount or concentration of a chemical that may be found in, or discharged to, the environment. Location-specific ARARs are restrictions on the concentrations of hazardous substances or on conducting activities solely because they are in specific locations. Specific locations include floodplains, wetlands, historic places, and sensitive ecosystems or habitats. Action-specific ARARs are technology- or activity-based requirements or limitations for remedial activities. These requirements are triggered by the particular remedial activities conducted at the site. The remedial alternatives selected by the Navy will meet substantive provisions of all chemical-, location-, and action-specific ARARs. The ARARs that will be met by the selected alternatives are summarized in Attachment A.
- **Cost-Effectiveness** – The selected remedy would provide overall protectiveness proportional to their costs and are therefore considered cost-effective.
- **Utilization of Permanent Solution and Alternative Treatment Technologies or Resource Recovery Technologies to the Maximum Extent Practicable** – The Navy has determined that a containment remedy, combined with excavation of small quantities of more highly contaminated soil, represents the maximum extent to which permanent solutions can be used in a cost effective manner because soil contamination is widely dispersed across the installation. The in situ treatment of contaminated groundwater meets the preference for alternative treatment technologies. The selected remedy is expected to be permanent and effective in light of the anticipated land use.



- Preference for Treatment as a Principal Element** – The selected remedy for soil does not satisfy the statutory preference for treatment as a principal element of the remedy because there is no cost-effective means of treating the large quantity of low-level soil contamination and the small quantities of soil to be excavated cannot be treated in a cost-effective manner. The soil remedy will not reduce the toxicity, mobility, or volume of hazardous substances, pollutants, or contaminants through treatment for the contaminated soil remaining on site but will provide for the off-site disposal of more highly contaminated soil at a facility which will minimize the potential for those hazardous substances to migrate or otherwise pose a threat. The selected remedy for groundwater satisfies the statutory preference for treatment as a principal element of the remedy; that is, it reduces the toxicity, mobility, or volume of hazardous substances, pollutants, or contaminants as a principal element through treatment. The selected remedy for radiologically impacted soil and remediation of radiologically impacted building materials does not include treatment as a principal element of the remedy because there is no available technology for the reduction in the toxicity or volume of radionuclides in contaminated soil or building materials.
- Five-Year Review Requirements** – Because the selected remedy will result in hazardous substances, pollutants, or contaminants remaining on site above levels that allow for unrestricted use, a statutory review will address Parcels D-1 and UC-1 in accordance with the schedule established for HPS site-wide 5-year review after the remedial action is initiated to ensure the remedy is protective of human health and the environment.

## 2.10 COMMUNITY PARTICIPATION

Community participation at HPS includes a Restoration Advisory Board (RAB), public meetings, public information repositories, newsletters and fact sheets, public notices, and an IR Program website. The Community Involvement Plan for HPS provides detailed information on community participation for the IR Program and documents interests, issues, and concerns raised by the community regarding ongoing investigation and cleanup activities at HPS.

In the late 1980s, the Navy formed a technical review committee (TRC) consisting of the Navy, community members, and regulatory agency representatives. The TRC met to discuss environmental issues pertaining to HPS. In 1993, pursuant to the Defense Environmental Restoration Program, Title 10 *United States Code* § 2705(d), the Navy formed the RAB, which replaced the TRC. The RAB consists of members of the Navy, the community, and the regulatory agencies. RAB meetings are held on the fourth Thursday of every month and are open to the public to provide opportunity for public comment and input. Documents and relevant information relied on in the remedy selection process will be made available for public review in the public information repositories listed below or on the [IR Program website](#)<sup>(44)</sup>.

San Francisco Main Library  
100 Larkin Street  
Government Information Center, 5th Floor  
San Francisco, California 94102  
Phone: (415) 557-4500

Anna E. Waden Bayview Library  
5075 Third Street  
San Francisco, California 94124  
Phone: (415) 355-5757

For access to the Administrative Record or additional information on the IR Program, contact:

Mr. Keith Forman  
Hunters Point Shipyard BRAC Environmental Coordinator  
Base Realignment and Closure Program Management Office West  
1455 Frazee Road, Suite 900  
San Diego, California 92108-4310  
Phone: (619) 532-0913  
e-mail: keith.s.forman@navy.mil

In accordance with CERCLA §§ 113 and 117, the Navy provided a public comment period from July 23, 2008, to August 22, 2008, for the proposed remedial action described in the Proposed Plan for Parcels G, D-1, D-2, and UC-1. A public meeting to present the Proposed Plan was held at 6:30 to 8:00 p.m. on July 30, 2008. Public notice of the meeting and availability of documents was placed in the *San Francisco Examiner* on July 27, 2008.

### **3. RESPONSIVENESS SUMMARY**

The responsiveness summary is the third component of a ROD; its purpose is to summarize information about the views of the public and support agency on both the remedial alternatives and general concerns about the site submitted during the public comment period. It documents in the record how public comments were integrated into the decision-making process. The participants in the public meeting, held on July 30, 2008, included community members, RAB members, and representatives of the Navy, EPA, DTSC, and the Water Board. Questions and concerns received during the meeting were addressed at the meeting and are documented in the meeting transcript. Responses to comments provided at the meeting and received during the public comment period by the Navy, EPA, DTSC, or the Water Board are included in the responsiveness summary (Attachment B).

**ATTACHMENT B**  
**RESPONSIVENESS SUMMARY**

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**ATTACHMENT B. RESPONSIVENESS SUMMARY**

<b>Proposed Plan for Parcel D, Hunters Point Shipyard</b>		
<b>Spoken Comment by Kristine Enea received at the public meeting held July 30, 2008</b>		
<b>Comment Number</b>	<b>Comment</b>	<b>Response</b>
1	<p>I feel comfortable that the RAD material will not escape the trucks. However, trucks themselves sometimes take dirt out with them. I've seen trucks come out with dirt on the fender. So my request would just be to make sure that the trucks themselves are clean of dirt, not because I'm afraid of radiological contamination, but because I live on Innes Avenue. All the trucks go by my house, and our houses are kind of dirty.</p> <p>[Refer to the transcript of the public meeting beginning on page 38 for the complete comment.]</p>	<p>Appropriate engineering measures (for example, inspecting and cleaning trucks before they leave the site) will be used during and following remediation to further protect the surrounding Bayview Hunters Point community. Furthermore, radiologically impacted material is transported off site in sealed containers to prevent any releases.</p>

**ATTACHMENT B. RESPONSIVENESS SUMMARY**

<b>Proposed Plan for Parcel D, Hunters Point Shipyard</b>		
<b>Spoken Comments by Ahimsa Sumchai received at the public meeting held July 30, 2008</b>		
<b>Comment Number</b>	<b>Comment</b>	<b>Response</b>
1	<p>I wanted to go on record as being very, very strongly opposed to a proposal to early transfer. Parcel UC-1, I am strongly opposed to any plan to dirty-transfer a parcel that in its reuse is expected to be a site for residential development. And Parcel UC-1 is slated for mixed-use development under the current redevelopment plan.</p> <p>[Refer to the transcript of the public meeting beginning on page 39 for the complete comment.]</p>	<p>Parcel UC-1 consists mostly of a portion of Spear Avenue. Figure 4 in the Proposed Plan shows a portion of Parcel UC-1 is planned for mixed use. However, residential reuse of this street area is unlikely. Furthermore, no data were collected within Parcel UC-1 because no historical activities with risk concerns took place in this area. Nevertheless, all of Parcel UC-1 will be covered to protect all users from exposure to the surface soil.</p>
2	<p>Additionally, Parcel UC-1 is adjacent to Redevelopment Block 30A, which you have identified as being a region in which the soil concentrations approached <math>10^{-6}</math>, and that concerns me. The risk, of course, is <math>10^{-5}</math>.</p> <p>So I really do think that we are identifying a region of Parcel D that is at significant risk for human exposure and that – you’ve documented that, and I just think it doesn’t make common sense to not do a full cleanup of a parcel that is potentially slated for residential development.</p> <p>[Refer to the transcript of the public meeting beginning on page 39 for the complete comment.]</p>	<p>Table 1 in the Proposed Plan shows that the cancer risk at Redevelopment Block 30A based on residential exposure to chemicals is <math>2 \times 10^{-7}</math> and for exposure to radionuclides is <math>1 \times 10^{-6}</math>. Both these risk values are less than the range that the Navy and the regulatory agencies consider as acceptable.</p> <p>The goal of the remedial action at Parcel D-1, D-2, G, and UC-1 is to protect human health and the environment to the standards set by the federal and state regulatory agencies. The remedies proposed in the proposed plan, and detailed in this Record of Decision (ROD), address all contamination that resulted from past Navy activities. After all the proposed actions are conducted and operation and maintenance and institutional controls (IC) are implemented, the actions proposed will be protective of human health and the environment.</p>
3	<p>Additionally, it violates community acceptance, as documented in Proposition P, which was passed by the overwhelming majority of San Francisco voters in the year 2000 and that called for cleanup of the Shipyard to residential standards.</p> <p>[Refer to the transcript of the public meeting beginning on page 39 for the complete comment.]</p>	<p>The goal of the remedial action at Parcels D-1, D-2, G, and UC-1 is to protect human health and the environment to the standards set by the regulatory agencies. Cleanup goals consider the expected future land use so not all areas will be remediated to residential levels. For example, areas that will become open space will be remediated to standards that consider recreational use. Nevertheless, all of Parcels D-1, D-2, G, and UC-1 will be covered to protect all users from exposure to the surface soil. Community acceptance is considered in the ROD as required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).</p>

## ATTACHMENT B. RESPONSIVENESS SUMMARY

Proposed Plan for Parcel D, Hunters Point Shipyard		
Written Comments by City and County of San Francisco received August 15, 2008 by email		
Comment Number	Comment	Response
1	In the Overview of Proposed Institutional Controls, Proposed Activity Restrictions Relating to VOC vapors at Specific Locations within Parcel D-1 and G, it states that "Initially, the ARIC includes all of Parcel D-1 and G". We think this is a misrepresentation of the current state of knowledge about the ARIC for VOC vapors and unnecessarily restricts Parcel D-1 and G. Our request is to phrase the restriction as "Initially, the ARIC will include all areas of the Parcels D-1 and G with soil gas levels above the remediation goals." This sentence more accurately reflects the current state of knowledge about the ARIC for VOC vapors and describes where the ARIC will be required. The soil gas surveys will be performed in areas where past uses and data suggest possible concerns regarding soil gas. However, based on the current knowledge of the site we are certain that there are many areas where: (a) no soil gas sampling will be required and (b) there will be no requirement for an ARIC for VOC vapors.	The area requiring institutional controls (ARIC) for vapor intrusion may be modified as remediation is completed or in response to further sampling and analysis that establishes that areas now in the ARIC do not pose unacceptable potential exposure risk to volatile organic compound (VOC) vapors. The initial ARIC is proposed to include the entire area of Parcels D-1 and UC-1 because existing data for soil gas are insufficient to further reduce the size of the ARIC.
2	Soil gas remediation goals need to be established in the Parcel D-1 and G RODs. The language relating to soil gas remediation goals on page 8 of the Proposed Plan, which states that a numerical goal for each VOC will be established <i>in the remedial design (RD)</i> and on page 14, that survey results <i>following remedial actions</i> will be used to establish risk-based remediation goals for soil gas should be changed to reflect that soil gas remediation goals will be established in the ROD. If the current schedule for the ROD would be impacted by the establishment of these soil gas goals, a mechanism for adding these goals to the ROD should be discussed.	The text on page 8 of the Proposed Plan was incorrect as stated. Remediation goals for VOCs to address exposure via indoor inhalation of vapors may be superseded based on COC identification information from future soil gas surveys. As potential risks from soil gas are partially dependent on the structures and other modifications that will be constructed for future use of the property, the soil gas risk calculations must wait until decisions are made on the proposed use designs (i.e., structures and ground cover layouts). Future action levels would be established for soil gas, would account for vapors from both soil and groundwater, and would be calculated based on a cumulative risk level of $10^{-6}$ using the accepted methodology for risk assessments at HPS.. The results of the survey will be used to evaluate the need for additional remedial action and to identify where the initial ARICs for VOCs shall be retained and areas where they shall be released.

**ATTACHMENT B. RESPONSIVENESS SUMMARY**

<b>Proposed Plan for Parcel D, Hunters Point Shipyard</b>		
<b>Written Comments by City and County of San Francisco received August 15, 2008 by email</b>		
<b>Comment Number</b>	<b>Comment</b>	<b>Response</b>
3	We appreciate that the Navy has revised the text of the proposed plan to discuss some of the remedy implementation plans in relation to reuse areas instead of redevelopment blocks. In future documents please continue to work towards the goal of dropping the use of the redevelopment blocks to describe areas of the parcel because land planning efforts are anticipating a change to the configuration of the blocks.	<p>The proposed plan was revised to reduce the use of and emphasis on redevelopment blocks to the extent possible. However, a means to clearly and unambiguously identify areas within former Parcel D is still needed to explain the proposed remedial actions, and redevelopment blocks still serve that purpose. The Navy would appreciate communication from the city when changes to redevelopment blocks, and especially those changes that affect the reuse exposure, are identified.</p> <p>The Navy will work closely with the city to use the most current plans for land reuses at Parcel D. The Navy will continue to use redevelopment blocks, only when necessary, in the three RODs.</p>
4	We would like to point out for the record, that once the engineering controls and institutional controls are properly installed and maintained the current design of the proposed remedies will cut off pathways for: (a) contact with soil contaminants and (b) inhalation of indoor VOC vapors and this means that the entire property will be health protective for all types of uses.	<p>The proposed remedial alternatives are specific to the reuse identified for each area. Future residents would be protected in areas currently identified for industrial or recreational reuse only by the consistent enforcement of the activity restrictions described by the proposed ICs. For example, the ARIC for vapor intrusion would need to be maintained in areas currently identified as open space (unless the ARIC could be modified by new data for soil gas, as discussed above in the response to comment 1). The Navy believes that the proposed remedy would result in an environment that would not pose health risks for future residents. However, this does not mean that future reuse would be unrestricted. The following text was included on the first page of the proposed plan to note the general protectiveness of the planned revised remedy: <i>"After all the proposed actions are conducted and operation and maintenance and ICs are implemented, the actions proposed will be protective of human health and the environment and will meet all cleanup objectives."</i></p>

**ATTACHMENT B. RESPONSIVENESS SUMMARY**

<b>Proposed Plan for Parcel D, Hunters Point Shipyard</b>		
<p><b>Written Comments by J.V. McCarthy received by email on July 31, 2008.</b></p> <p><b>Only comments that specifically reference Parcel D (or the new Parcels G, D-1, D-2, or UC-1) are included in this Responsiveness Summary. All other comments were addressed in the Responsiveness Summary for Parcel B. Comment numbers reflect those used in the Responsiveness Summary for Parcel B.</b></p>		
<b>Comment Number</b>	<b>Comment</b>	<b>Response</b>
6	The basic issues cited for "Parcel G", per notice to Congresswoman N. Pelosi and Supervisor A. Peskin also apply to Covenant Restriction for "Parcel B" (refer to the following page with items # 1.-10.)	The Navy does not have a copy of this notice and cannot respond. However, the Navy team is aware of and is ensuring that there is consistency between land use restrictions being considered and developed for the different parcels.
Introduction to items 1-10	How inappropriate is a linking of "Candlestick Park" development with Hunter's Point Shipyard reuse? If "Parcel 49" of the former Hunter's Point Shipyard is to be considered fit for new stadium construction, the potential liability is worth more than a passing glance. A deferral or covenant agreement required as the waiver to federal conditions of the city's exclusive discretion, to federal conditions in transfer, is specified from CERCLA 120 h(3)(C). This is because the environmental remediation is not without conditions. No matter what the political priorities, the land speculation, or the wishful thinking, parcel areas requiring this kind of covenant agreement will remain so for good reasons (refer to CLEAN II, Department of the Navy, 09/04/98, HPS). "Parcel 49" is not exempt. The local SF CUPA or HAZMAT agency, the involved state agencies, and the title insurance people will all have serious obligations and concerns to be maintained.	Access restrictions on future activities will be contained in "Covenant(s) to Restrict Use of Property", Quitclaim Deed(s), the Risk Management Plan, and if required, any other workplan or document approved in accordance with these referenced documents. The protectiveness of the remedy will be evaluated at least every 5 years to ensure it remains protective. These 5-year reviews are required by law and will include any new information that may become available in the future.
Item 1	Subparcels S-28, S-29, S-38, and S-39 are co-located where "Parcel 49", formerly in Parcel D, has been proposed. All are cited for sandblast waste and radioactive materials, at least some of which are likely to have been left from "Operation Crossroads" (1946-1947, see "Historical Radiological Assessment", 2004).	Former Parcel D was constructed prior to "Operation Crossroads" and is not expected to have radioactive waste materials from that operation. Radiological surveys have been conducted in all areas and buildings at Parcels D-1 and UC-1 that have been identified, based on shipyard activities and work practices, to potentially be radiologically impacted. The areas identified as having radiological risks in the surveys are being addressed and radiologically remediated by the proposed remedy and released for unrestricted future use.

**ATTACHMENT B. RESPONSIVENESS SUMMARY**

<b>Proposed Plan for Parcel D, Hunters Point Shipyard</b>		
<p><b>Written Comments by J.V. McCarthy received by email on July 31, 2008.</b></p> <p><b>Only comments that specifically reference Parcel D (or the new Parcels G, D-1, D-2, or UC-1) are included in this Responsiveness Summary. All other comments were addressed in the Responsiveness Summary for Parcel B. Comment numbers reflect those used in the Responsiveness Summary for Parcel B.</b></p>		
<b>Comment Number</b>	<b>Comment</b>	<b>Response</b>
Item 2	It is unlikely that the maximum extent of excavation in the foreseeable future, as sponsored by the Navy, will go any farther than the inconclusive excavation, to be capped, for IR-07 and IR-18 of Parcel B where the radiation at depth will go unresolved. Consider the implications in D for S-28, S-29, S-38, and S-39.	Please see the Responsiveness Summary in the Parcel B amended ROD for discussion of the IR Sites 7 and 18. All of Parcels D-1 and UC-1 will be covered to protect all users from exposure to the soil regardless of the future use. Covers are an effective way to eliminate exposure and protect human health.
Item 3	The materials applied for support piers to penetrate landfill are likely to be what is planned for building foundation support, as under the cap required for "Parcel 49" remediation.	Any construction-related foundation support piers constructed after transfer will be protective of human health and the environment, and will meet the requirements of the remedial design. Any breaching or alteration of the cover post-transfer will be conducted in compliance with the Covenant(s) to Restrict Use of the Property, Quitclaim Deed(s), and the Risk Management Plan, all of which will be reviewed and approved by the regulatory agencies. Materials used during remediation, including the cover material, will be selected during the remedial design phase of the project and will be constructed to be robust and persistent over time.



**ATTACHMENT B. RESPONSIVENESS SUMMARY**

<b>Proposed Plan for Parcel D, Hunters Point Shipyard</b>		
<b>Written Comments by J.V. McCarthy received by email on August 20, 2008.</b>		
<b>Comment Number</b>	<b>Comment</b>	<b>Response</b>
1	As an hasty and inadequately addressed parcel transfer proposal, "Parcel G" is a good example of how the City of San Francisco, and some public officials, could bring great harm upon themselves. Who would bear ultimate "responsibility" with consequences (?) once an incomplete and inadequate investigation has been signed off, even with CERCLA 120 (h)(3)(C)? If "Blocks" # 28, 29, 38, and 39 are any example, perhaps it would be where existing documentation would suggest considerable more caution.	<p>If the property in Parcels D-1 and UC-1 are conveyed as an "early transfer" subject to the requirements of Section 120(h)(3)(C) of CERCLA, the Navy must provide assurances approved by EPA and the State of California that there will be interim land use restrictions to ensure the protection of human health and the environment.</p> <p>Access restrictions on future activities will be contained in "Covenant(s) to Restrict Use of Property", Quitclaim Deed(s), the Risk Management Plan, and if required, any other work plan or document approved in accordance with these referenced documents. The protectiveness of the remedy will be evaluated at least every 5 years to ensure it remains protective. These 5-year reviews are required by law and will include any new information that may become available in the future.</p>
2	Of "Block" 28, it appears to be unknown or unclear whether contaminants from IR-34 could include plume discovery, as from, storage tank contents unspecified at the Building 363 site.	There is no Redevelopment Block 28 within the former Parcel D or the new Parcels D-1 and UC-1. However, potential contaminants associated with IR-34 were evaluated for Parcel D and are summarized in the Final Revised Feasibility Study for Parcel D (SulTech 2007).
3	Of "Block" 29, it appears to be unknown or unclear whether multiple fluid contaminants or plume discovery, from IR-09 could have come into contact with or mixed with contaminants from IR-33.	Within Redevelopment Block 29, the potential mixing of contaminants between the IR-09 plumes and the IR-33 plumes was considered and is summarized in the Final Revised Feasibility Study for Parcel D (SulTech 2007). Block 29 is within Parcel G; therefore, this comment is not related to Parcels D-1 and UC-1.
4	Of "Block" 38, it appears to be unknown or unclear whether contaminants from IR-33, by the specified plumes at the Building 411 site, could have been complicated by radiological impact at the Building 364 site.	The contamination associated with Buildings 411 and 364 (they are both within IR-33) were evaluated in conjunction with Block 38. The chemical risks are presented in the Final Revised Feasibility Study for Parcel D (SulTech 2007) and the radiological risks and combined risks are presented in the Final Radiological Addendum to the Revised Feasibility Study for Parcel D (SulTech 2008). Block 38 is within Parcel G; therefore, this comment is not related to Parcels D-1 and UC-1.
5	Of "Block" 39, it appears to be unknown or unclear whether contaminants from IR-65 or IR-34, could include a plume discovery, as from the Building 324 site, or a radiological impact from the Building 364 site.	The contamination associated with IR-65, IR-34 and specifically the Building 324 site were evaluated as part of Redevelopment Block 39 in the Final Revised Feasibility Study for Parcel D (SulTech 2007). Radiological impacts associated with the Building 364 site are considered in the Final Radiological Addendum to the Revised Feasibility Study for Parcel D (SulTech 2008). Block 39 is within Parcel G; therefore, this comment is not related to Parcels D-1 and UC-1.



**ATTACHMENT B. RESPONSIVENESS SUMMARY**

<b>Proposed Plan for Parcel D, Hunters Point Shipyard</b>		
<b>Written Comments by J.V. McCarthy received by email on August 20, 2008.</b>		
<b>Comment Number</b>	<b>Comment</b>	<b>Response</b>
6	The potential of radiological impact, as in residual unspecified radioactive contamination, is serious in "Parcel G". Is it preferred that waiting for consequences of breaching CERCLA 120 (h)(3)(C), beneath the required "covers" with foundation support piers, will be the expedient "Record of Decision" (?).	If the property in Parcels D-1 and UC-1 are conveyed as an "early transfer" subject to the requirements of Section 120(h)(3)(C) of CERCLA, it is anticipated that the transferee will be responsible for constructing covers after transfer. The covers will be constructed to meet all the requirements of the remedial design, and will be conducted under the oversight of the regulatory agencies. The deed of transfer will contain any necessary interim land use restrictions required to protect covers following construction and comply with Section 120(h)(3)(C) of CERCLA.  Please see the response to Comment Number 7 below for a discussion of foundation support piers.
7 (item 1)	Construction related "covers", as well as foundation support piers where required through bay mud and fill, are out of compliance with "... land disturbing activity..." restriction ("Restricted Activities", a.) where this occurs following transfer.	Any construction-related covers or foundation support piers constructed after transfer will be constructed to be protective of human health and the environment, and will meet the requirements of the remedial design.
8 (item 2)	Construction related "alteration, disturbance, or removal..." is likely to be out of compliance where this may involve installation of public utilities for permanent structures, as required by construction activities which follow property transfer.	Any breaching or alteration of the cover post-transfer will be conducted in compliance with the Covenant(s) to Restrict Use of the Property, Quitclaim Deed(s), and the parcel-specific risk management plan, all of which will be reviewed and approved by the regulatory agencies.

**ATTACHMENT B. RESPONSIVENESS SUMMARY**

<b>Proposed Plan for Parcel D, Hunters Point Shipyard</b>		
<b>Written Comments by Michael F. McGowan, Arc Ecology, received by email on August 25, 2008</b>		
<b>Comment Number</b>	<b>Comment</b>	<b>Response</b>
1	On page 1 the proposed remedy for treating groundwater at Installation Sites IR-09, IR-33, and IR-71 is to use chemicals or biological nutrients to break down contaminants. These methods, zero valent iron (ZVI) treatment and bacterial enhancement, are effective under certain circumstances but are still considered experimental at Hunters Point Shipyard. Please document with a reference to a report or an explanation of the logic that supports the effectiveness of these treatments at the shipyard. If they are not as effective as hoped for, what does the Navy propose to do to remediate the groundwater, or will this problem be passed along to the new owners of the property?	Treatability studies using the proposed in situ biological and chemical treatment technologies have been conducted at other parcels with similar conditions and shown to be effective. Injection of ZVI was studied at Parcel B (Engineering/ Remediation Resources Group, Inc. and URS Corporation "Final Cost and Performance Report, Zero-Valent Iron Injection Treatability Study, Building 123, Parcel B, Hunters Point Shipyard" June 2004). Injection of a biological growth medium was studied at Parcel C (Shaw Environmental "Final In Situ Sequential Anaerobic-Aerobic Bioremediation Treatability Study, Remedial Unit C5, Building 134, Installation Restoration Site 25, Hunters Point Shipyard" November 2005).
2	Page 1 last paragraph states that the Navy will consider comments on the Proposed Plan when three Records of Decision (ROD) are prepared for the new sub-parcels within Parcel D. Please explain what opportunity will be provided for public input to the cleanup plans if members of the public are not satisfied with the responses to comments as presented in the RODs.	Members of the public may contact Mr. Keith Forman, the Navy Base Realignment and Closure Environmental Coordinator, directly (see page 16 of the Proposed Plan for contact information). Members of the public may also coordinate with community members of the Restoration Advisory Board (RAB) or attend the RAB meetings which are held on the fourth Thursday of every month (except November and December) and are open to the public (see page 15 of the Proposed Plan for more information about the RAB).
3	Page 6 last paragraph states that action is warranted for cumulative risk of cancer that exceeds a certain probability. Shouldn't that be incremental risk above a background? Please clarify.	Remedial action is proposed for areas where health risks exceed $1 \times 10^{-6}$ (one in a million). For the evaluation of health risks from exposure to chemicals in soil, metals with measured concentrations that are less than Hunters Point ambient levels (HPAL) were not included in the calculation of health risks and identification of areas that require remedial action. The approach used in the human health risk assessment (HHRA) to address ambient levels of metals is described in Section 2.5.1 of the ROD for Parcels D-1 and UC-1.

**ATTACHMENT B. RESPONSIVENESS SUMMARY**

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4	The explanation of risk assessment and cleanup goals with respect to proposed reuse areas is confusing. For example, different exposure scenarios (concentration x time) were used for industrial than for residential. Was it assumed that industrial workers would be exposed fewer hours of the day than residents? What if an industrial worker was employed on Parcel D for 50 years while residents moved away every 5 years? What were the assumptions underlying these scenarios?	<p>Tables B-4 through B-9 of the Final Revised Feasibility Study for Parcel D (SulTech 2007) summarize the exposure assumptions used in the HHRA to calculate health risks for residential, industrial, recreational, and construction worker exposure to chemicals in soil and groundwater at Parcel D. The exposure assumptions used in the HHRA are based on U.S. Environmental Protection Agency (EPA) and California Environmental Protection Agency (Cal/EPA) recommendations for evaluating reasonable maximum exposure, and were also based on agreement with the Base Realignment and Closure Cleanup Team (BCT).</p> <p>Multiple conservative exposure assumptions were combined in the HHRA so that the calculated health risks over-predict actual risks. The HHRA calculated health risks using assumptions for potential exposure that are specific to the planned reuse for each redevelopment block at Parcel D. For example, the planned reuse is industrial for redevelopment block 42. Therefore, the health risks for each of the exposure areas within this redevelopment block was calculated using assumptions for industrial exposure. Likewise, the preliminary remediation goals for this redevelopment block are protective for exposure during industrial use.</p> <p>As a conservative measure, the HHRA additionally evaluated residential, industrial, recreational, and construction worker risks for each exposure area throughout former Parcel D, regardless of the planned reuse. This approach was included to provide information on potential risks for all potential reuses, in the event that revisions are made to the Redevelopment Plan for HPS.</p> <p>The preferred alternative for soil at Parcels D-1 and UC-1 involves removal of soil in selected areas where chemicals exceed reuse-specific remediation goals and application of parcel-wide covers. The use of parcel-wide covers will eliminate the potential for contact with and health risks from exposure to chemicals in soil across all of former Parcel D.</p>

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5	Do the results of the different risk scenarios mean that the areas designated for industrial can be left more contaminated than those designated for residential?	Use of reuse-specific exposure scenarios for the HHRA (for example, industrial exposure for redevelopment block 42 at Parcel D-1) and for preliminary remediation goals results in different preliminary remediation goals for residential and industrial reuse areas. As noted in the response to comment 4, the use of parcel-wide covers will eliminate the potential for contact with and health risks from exposure to chemicals in soil across all of Parcel D, regardless of the remediation goals.
6	Will additional cleanup be required and who will be responsible if the future use of an area changes from industrial to residential?	Additional cleanup is not anticipated if future use changes. Covers will block exposure to soil, regardless of whether the exposure scenario is residential or industrial. However, the transferee would be responsible if changes in land reuse required changes in the remedy.
7	Page 7 second full paragraph states that the health risk assessments were based on reasonable exposure assumptions recommended by EPA and DTSC. What were these assumptions?	As stated in the response to comment 4, Tables B-4 through B-9 of the Final Revised Feasibility Study for Parcel D (SulTech 2007) summarize the exposure assumptions used in the HHRA to calculate health risks for residential, industrial, recreational, and construction worker exposure to chemicals in soil and groundwater at Parcel D. The exposure assumptions used in the HHRA are based on EPA and Cal/EPA recommendations for evaluating reasonable maximum exposure, and were also based on agreement with the BCT.
8	Page 7 next to last sentence says that the Remedial Action Objectives will be appropriate if the reuse plan is changed. However, the previous sentence says that the planned future land use was an important component in developing the RAOs. These two statements seem to conflict. Please explain.	The planned future land use was used to help develop the RAOs; however, the RAOs are carefully worded so that there is flexibility in whatever reuse is selected. Therefore, the RAOs presented in the proposed plan and associated RODs can be used for any reuse plan that the San Francisco Redevelopment Agency decides to implement prior to the ROD.
9	Page 14 Radiological Alternative R-2 next to last paragraph states that the Time Critical Removal Action is anticipated to achieve Remedial Action Objectives in the proposed plan. What if there is still residual radiation above the remediation goals? Will the radiation goals for industrial use areas present a problem if the use changes to residential?	Remediation will continue until the remediation goals for radionuclides are achieved. Remediation goals are not set separately for industrial areas. All areas will be cleaned to residential standards for radionuclides.

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10	If radiological decontamination of all areas will result in free release, then the future reuse designations should not matter. If this is so, please state that all areas will be cleaned to "residential standards" with regard to radiological materials. The desire for residential standard cleanup is very strong in the local community.	The risk assessment for radionuclides used the residential exposure scenario to bound the risks to industrial workers or recreational users. All areas will be cleaned to residential standards for radionuclides.